

REMARKS

In the Office action dated June 18, 2003, claims 40-44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of U.S. Patent No. 6,228,082 (“Baker et al. ‘082”) in view of U.S. Patent No. 6,401,719 (“Farley et al. ‘719”). Claims 45-50 were allowed. Claims 40-50 are pending in the present application.

Applicant greatly appreciates courtesy extended by the Examiner during the interview on October 6, 2003. During the interview, arguments were presented to the Examiner that the tumescent technique taught in Baker et al. ‘082 was limited to the particular embodiment shown in Figure 27 in which the fluid delivery vessel is part of the energy application device; that Baker et al. ‘082 teaches using a tumescent technique to insulate and limit thermal damage to surrounding tissue, and not to compress the vein being treated; and that Baker et al. ‘082 teaches away from the claimed invention. The Examiner stated that the Baker et al. ‘082 would be reviewed in light of the arguments presented during the interview.

Applicant has carefully reviewed the arguments presented in the Office action and respectfully requests reconsideration of the claims in view of the remarks presented below.

The Office action asserts that Baker et al. ‘082 discloses all of the limitations of claims 40-44 except an expandable energy applicator, and that Farley et al. ‘719 discloses a similar device that includes an expandable energy applicator. Applicant respectfully

submits that, in the rejection of claims 40-44 as being unpatentable under Section 103(a), the teachings in Baker et al. '082 have been misconstrued.

The “tumescent technique,” as shown and described in Baker et al. '082, involves delivering a dilute anesthetic solution to the target site through a fluid lumen within the larger return electrode shaft 706. Thus, Baker et al. '084 teaches delivering the tumescent fluid through the electrode shaft that also holds the active electrode 704. This “tumescent” embodiment is illustrated in Figure 27 of Baker et al. '082, which is reproduced below:

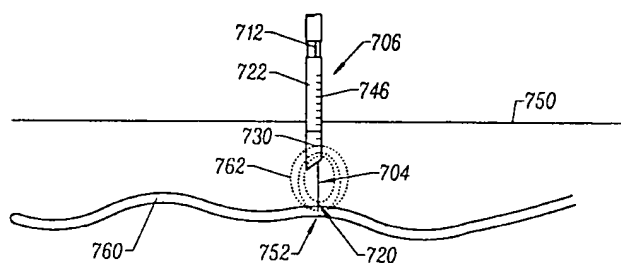


FIG. 27

The text at column 23, lines 25-49, refers to an active needle electrode 704 that is advanced (in what appears to be a puncturing action) through the outer surface of the skin to the target region of the vessel. A voltage is applied between the electrode 704 and its return 706 to cause thermal damage to the vessel 760.

The electrode is shown being inserted into the vessel from directly above and through the skin. Thus, the energy flux lines (*i.e.*, as illustrated by the dashed lines identified as the electric current 762 in Baker et al. '082) will exist nearer the skin surface. Delivered through the return shaft 706, the tumescent fluid will operate as a heat

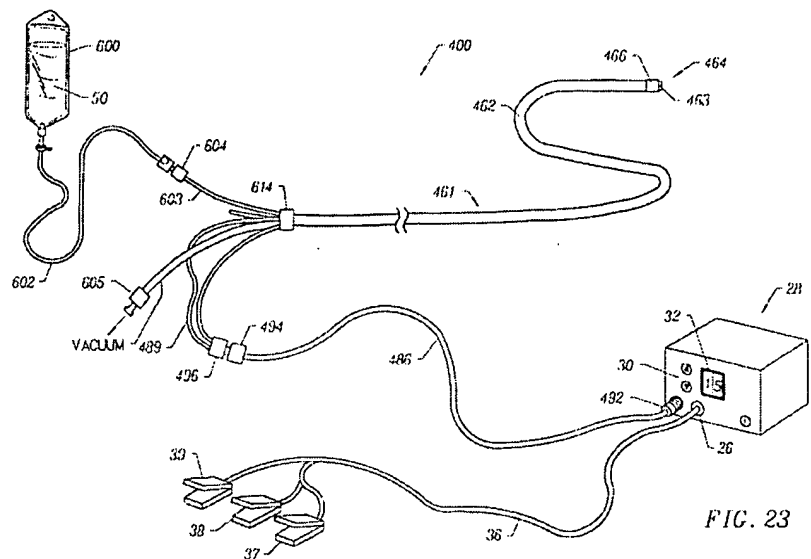
sink to limit thermal injury to the skin and lessen or avoid any scarring or burning of the skin. The tumescent fluid is not disclosed as being used to compress any anatomical structure. Baker et al. '082 specifically states that the fluid will reduce tissue heating around the target site and reduce collateral tissue damage. *See, e.g.*, col. 23, ln. 50 to col. 24, ln. 13.

Given the teaching in Baker et al. '082 that the needle electrode punctures through the skin from directly above the vein treatment site, Baker et al. '082 actually teaches away from compression of the vein since compression from above by fluid delivered through the return electrode shaft 706 (as suggested by Fig. 27 and the accompanying text), would push the vein down and away from the needle electrode 704, which would defeat its purpose.

Moreover, Applicant respectfully points out that the disclosure in Baker et al. '082 of the so-called tumescent technique is clearly limited to an embodiment that uses a rigid needle electrode 704 and not a catheter as required by the claims. A “catheter” is “a tubular, flexible, surgical instrument that is inserted into a cavity of the body ...” *See* Dorland’s Illustrated Medical Dictionary (1994) at page 279. As noted earlier, Baker et al. '082, at column 23, lines 25-49, refers to an active needle electrode 704 that is rigid and advanced directly through the outer surface of the skin to the target region of the vessel.

A rigid needle is not a catheter. Applicant respectfully submits that the rigid needle electrode 704 disclosed in Baker et al. '082 clearly is not the claimed "catheter" introduced into the hollow anatomical structure. Although Baker et al. '082 discloses a catheter at col. 19, line 45

though col. 20, line 37, this text refers to a separate embodiment in which an elongate catheter system 400 is used to treat vascular disorders such as aneurysms, vascular malformations, and the like. This separate



"catheter" embodiment is illustrated in Figure 23 of Baker et al. '082. The electrosurgical catheter 461 includes a fluid delivery lumen within the catheter, but that fluid is used as an irrigant. Col. 20, lines 22-37. There is simply no teaching in Baker et al. '082 of using a fluid delivery lumen separate from the catheter, let alone a tumescent technique in connection with this catheter embodiment.

In addition, the "catheter" embodiment (*see, e.g.,* Fig. 23) teaches using a lumen located in the catheter shaft to deliver fluid, and the "tumescent" embodiment (*see, e.g.,* Fig. 27) teaches using a lumen located in the return electrode shaft to deliver the tumescent fluid, the combination of which would result in having the so-called "tumescent" fluid delivered into the vessel in which the catheter is located instead of the

tissue around the vessel. Thus, there is no motivation for combining the separate and distinct "catheter" and "needle" embodiments of Baker et al. '082. And the same applies for the tumescent/needle embodiment of Baker et al. '082 and the expandable energy applicator from Farley et al. '719. There is simply no motivation for combining these separate and distinct embodiments.

Applicant respectfully requests that the Section 103 rejection be withdrawn.

CONCLUSION

In light of the above amendments and remarks, Applicant respectfully requests favorable reconsideration of the present application. Should any question arise, kindly contact the undersigned.

Respectfully submitted,

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